

## SECTIONAL CABINET

### FIELD OF THE INVENTION

5 The present invention relates to a sectional cabinet,  
and more particularly to a sectional cabinet that  
combines a sectional metal rack and wooden side panels,  
back panels, door panels, and drawers normally used on  
a wooden cabinet, enabling the sectional cabinet to be  
10 horizontally extended as desired and show a high quality  
appearance.

### FIELD OF THE INVENTION

15 Generally, furniture may be divided into wooden  
furniture and sectional metal furniture according to the  
material used to manufacture the furniture. The wooden  
furniture normally presents an appearance more elegant  
than that of the sectional metal furniture that is  
20 usually in the form of a rack.

Most people choose wooden furniture for its elegant  
appearance and quality touch. The metal rack type  
sectional furniture is also incomparable to the wooden  
25 furniture in that the wooden furniture is able to provide

many different closed spaces to better protect things stored therein against dust. Therefore, most of currently available cabinets are made of wooden material.

5

The currently available sectional metal rack includes vertical posts formed from metal tubular members and horizontal shelves formed from metal meshes. This type of sectional rack can be easily assembled and  
10 disassembled by a user without using any tool. Moreover, the sectional rack may be freely horizontally extended to any desired configuration and dimensions to enable convenient use in different spaces. However, the shelves of such sectional rack are open and subject to  
15 dust. Moreover, people tend to position all kinds of things on the open rack to result in a disorder scene and make the rack less valuable at least from an appearance thereof. Therefore, the conventional sectional metal rack can hardly achieve the same function  
20 and value as the wooden cabinets.

#### SUMMARY OF THE INVENTION

A primary object of the present invention is to provide  
25 a sectional cabinet that combines wooden cabinet and

metal rack to allow horizontal extension of the sectional cabinet and show high quality and elegant feeling.

To achieve the above and other objects, the sectional cabinet of the present invention mainly includes a rack,  
5 and a plurality of wall panels, drawers, and door panels. The rack is formed from a plurality of vertical metal posts and horizontal shelves that are connected to the vertical posts via a plurality of connecting structures.  
10 The wall panels include side panels for mounting to two lateral sides of the rack, and back panels for closing a rear side of the rack, so as to define an internal space for the rack. And, the door panels and the drawers are mounted to a front side of the rack to define closed  
15 spaces adapted to store various things therein.

In the sectional cabinet of the present invention, the rack formed from the vertical metal posts and the horizontal shelves serves as a skeleton of the sectional  
20 cabinet. Each of the shelves includes a flat surface panel to exactly divide the internal space of the rack into an upper and a lower part.

The positions of the door panels and the drawers on the  
25 sectional cabinet of the present invention are freely

changeable to create more changes in the appearance of the sectional cabinet.

In the sectional cabinet of the present invention, all  
5 constitutive elements thereof are assembled together by way of hooking. Therefore, a user may easily assemble and disassemble the sectional cabinet according to actual need.

#### 10 BRIEF DESCRIPTION OF THE DRAWINGS

The structure and the technical means adopted by the present invention to achieve the above and other objects can be best understood by referring to the following  
15 detailed description of the preferred embodiments and the accompanying drawings, wherein

Fig. 1 is an assembled perspective view of a sectional cabinet according to an embodiment of the present  
20 invention;

Fig. 2 is an exploded perspective view of the sectional cabinet of Fig. 1;

25 Fig. 3 is an exploded perspective view of a connecting

structure for the sectional cabinet of the present invention;

Fig. 4 is a perspective view showing the assembling of  
5 a horizontal shelf to a vertical post of the sectional cabinet of the present invention;

Fig. 5 is an assembled sectional view of Fig. 4;

10 Fig. 6 is an exploded perspective view showing the connection of side panels to vertical posts of the sectional cabinet of the present invention;

Fig. 6-1 is an enlarged view of the circled area of Fig.  
15 6;

Fig. 7 is an exploded perspective view showing the connection of a back panel to vertical posts of the sectional cabinet of the present invention;

20

Fig. 7-1 is an enlarged view of the circled area of Fig.  
7;

Fig. 8 is a perspective view showing the assembling of  
25 a door hinge to a vertical post of the sectional cabinet

of the present invention;

Fig. 9 is an exploded perspective view of the door hinge of Fig. 8;

5

Fig. 10 is a perspective view showing the mounting of a space-dividing board in the sectional cabinet of the present invention;

10 Fig. 11 is a perspective view of a supporting member for supporting the space-dividing board of the present invention;

Fig. 12 shows the assembling of drawers to a rack of the sectional cabinet of the present invention;

15

Fig. 13 is a sectional view showing the connection of a rail for the drawer to a vertical post of the sectional cabinet of the present invention; and

20

Fig. 14 is an assembled perspective view showing the mounting of skirt boards to the vertical posts of the sectional cabinet of the present invention.

25 DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Please refer to Figs. 1 and 2 that are assembled and exploded perspective views, respectively, of a sectional cabinet according to an embodiment of the present invention. As shown, the sectional cabinet of the present invention mainly includes a rack 10 assembled from a plurality of vertical metal posts 11 and a plurality of horizontal shelves 12, and other constitutive elements, including a plurality of wall panels, drawers 40, and door panels 50. The wall panels include a plurality of side panels 20 and back panels 30. The side panels 20 are mounted to two lateral sides of the rack 10 and are therefore divided into left and right side panels 20. The back panels 30 are mounted to a rear side of the rack 10, the door panels 50 are mounted to a front side of the rack 10, and the drawers 40 are arranged on the rack 10 to define some closed spaces on the sectional cabinet.

Referring to Figs. 3 to 5, the horizontal shelves 12 are connected to the vertical metal posts 11 of the rack 10 via connecting structures 13. Each of the connecting structures 13 serves to connect one corner of the horizontal shelf 12 to the vertical post 11. The connecting structure 13 includes a portion adapted to

hook on the vertical post 11 and another portion adapted to support the horizontal shelf 12, so as to connect the vertical post 11 to the horizontal shelf 12.

5 More specifically, according to an embodiment of the present invention, the connecting structure 13 includes a connecting member 14 and a pad 15 attached to the connecting member 14. Each of the vertical posts 11 is provided at two lateral sides with two rows of hook eyes  
10 111, on which an upper and a lower hook 141, 142 provided on the connecting member 14 of the connecting structure 13 may be hooked to locate the connecting member 14 in place on the vertical post 11. A portion of the connecting member 14 opposite to the upper and lower  
15 hooks 141, 142 is exposed from the hook eyes 111 of the vertical post 11 to provide a guide rail 143, to which the horizontal shelf 12 can be attached. The pad block 15 includes a flat side for fitly attaching to the vertical post 11, and an outward and downward inclined  
20 side opposite to the flat side. The pad 15 is provided with an upper and a lower opening 152, 153, via which the upper and the lower hook 141, 142 of the connecting member 14 are extended into the hook eyes 111 on the vertical post 11, such that the pad 15 is attached to  
25 the connecting member 14.



An outer cover 16 is provided at each corner of the horizontal shelf 12. The outer cover 16 includes an open outer side and an open bottom. A rail-engaging portion 161 is formed in the outer cover 16. One side of the rail-engaging portion 161 in contact with the pad 15 is an inclined surface 162 corresponding to the inclined side 151 of the pad 15. The rail-engaging portion 161 engages with the guide rail 143 of the connecting member 14 to normally pull the connecting member 14 outward relative to the vertical post 11, as shown in Fig. 5, so that the outer cover 16, the connecting member 14, the pad 15, and the vertical post 11 are firmly connected to one another. When the outer covers 16 at all four corners of the horizontal shelves 12 are connected to corresponding connecting members 14, pads 15, and vertical posts 11, the horizontal shelf 12 is assembled to four vertical posts 11 to form the rack 10.

Each of the horizontal shelves 12 includes a flat surface panel attached to a top of a metal frame 121. The surface panel of the shelf 12 is preferably made of a wooden material. In addition to form part of the rack 10 of the sectional cabinet of the present invention, the horizontal shelves 12 also serve to divide an internal

space of the rack 10 into an upper and a lower part.

Referring to Figs. 6 and 6-1, the side panel 20 includes a surface panel 21 and an upper framing member 22  
5 connected to an upper edge of the surface panel 21. In the case the sectional cabinet is relatively high, the side panel 20 may include an upper and a lower surface panel 21, an upper framing member 22 connected to an upper edge of the upper surface panel 21, and an intermediate  
10 framing member 23 located between the upper and the lower surface panel 21.

The side panel 20 is mounted to and between two vertical posts 11 at the same side of the rack 10 preferably by  
15 way of hooking. The upper framing member 22 is provided at a lower surface with a channel 221 for receiving the upper edge of the upper surface panel 21 therein. The intermediate framing member 23 is provided at upper and lower surfaces with two channels 231 (only the channel  
20 231 at the upper surface is shown in the drawings) for respectively receiving a lower edge of the upper surface panel 21 and an upper edge of the lower surface panel 21 therein. Two lateral ends of the upper framing member 22 are adapted to downward insert into upper ends of the  
25 two vertical posts 11 supporting the side panel 20. The

two vertical posts 11 supporting the side panel 20 are provided on respective side surface facing toward the side panel 20 with a plurality of hook openings 112 for hooking members 24 to separately hook thereat. The  
5 intermediate framing member 23 is also provided at two lateral ends with engaging pins 232 that are adapted to engage with the hooking members 24. The upper and the lower surface panel 21 are also provided at two lateral edges with engaging pins 211 adapted to engage with the  
10 hooking members 24. Through engagement of the engaging pins 232, 211 with corresponding hooking members 24, the side panel 20 is fixed to the rack 10. When the side panel 20 is assembled to two vertical posts 11 that are located between two outmost pairs of vertical posts 11  
15 of the rack 10, the side panel 20 divides the internal space of the rack 10 into a left and a right smaller space.

Referring to Figs. 7 and 7-1, the back panel 30 is assembled to the rack 10 between two vertical posts 11  
20 at a rear side of the sectional cabinet preferably by way of hooking. For example, the two rear vertical posts 11 are provided at respective side surface facing toward two lateral edges of the back panel 30 with a plurality of hooking opening 113 for hooking members 31 to  
25 separately hook thereat. Meanwhile, the back panel 30

is provided on an inner side at two lateral edges with flathead pins 32 corresponding to the hooking openings 113 and the hooking members 31. Through engagement of the flathead pins 32 with corresponding hooking members 5 31, the back panel 30 is fixed to the rear vertical posts 11 of the rack 10.

Referring to Figs. 8 and 9, the door panel 50 is detachably connected to the vertical post 11 via a door 10 hinge 60. The door hinge 60 is hooked on the vertical post 11 without the risk of becoming worn when it is dismounted from the vertical post 11 and is therefore more durable for use. The door hinge 60 includes a fixing member 61 fixed to the door panel 50, a hanger 62 hooked 15 on the vertical post 11, an adjusting member 63 coupled with the hanger 62, and a turning member 64 and a spring 65 mounted between the adjusting member 63 and the fixing member 61. The hanger 62 is provided at an inner side with an upper and a lower hook 621, and at a central area 20 with an outward raised portion 622. The raised portion 322 has a first end pivotally connected to an end of the adjusting member 63, and a second end opposite to the first end formed into a recess 623. A screw 625 is threaded through the adjusting member 63 to engage with 25 the recess 623 and thereby connects the adjusting member

63 and the hanger 62 to each other. The hanger 62 is hooked to the vertical post 11 through engagement of the upper and lower hooks 62 with the hook eyes 111 on the vertical post 11. A cushion pad 66 is positioned between  
5 the hanger 62 and the vertical post 11. A screw 624 is screwed into the hanger 62 to press against the cushion pad 66, so that the upper and lower hooks 621 of the hanger 62 are caused to tightly hook to the hook eyes 111 on the vertical post 11 and thereby fix the door panel 50  
10 in place. One or more space-dividing boards 51 may be mounted in a closed space behind the door panel 50 to horizontally divide the space into two or more smaller spaces.

15 Referring to Figs. 10 and 11, the space-dividing board 51 has four corners supported on four supporting members 52 hooked on the vertical posts 11. An end of the supporting member 52 has a hook 521 adapted to hook on the hook eye 111 of the vertical post 11, and the other  
20 end of the supporting member 52 is a laterally extended supporting arm 522, on which one corner of the space-dividing board 51 is supported.

Referring to Fig. 12, each of the drawers 40 is slidably  
25 mounted on the rack 10 via a pair of rails 41, which are

preferably connected to the vertical posts 11 by way of hooking. Each of the rails 41 is provided at two ends with hooking portions 42 adapted to hook to the hook eyes 111 of the vertical post 11, such that the rail 41 can be located at any height on the vertical posts 11 as desired. The drawer 40 is guided by the pair of rails 41 to slide into and out of the rack 10. The hooking portion 42 includes an upper retaining hook 421 and a lower retaining hook 422 adapted to extend into two hook eyes 111 of the vertical post 11 and be retained thereto. To prevent the rail 41 from loosening from the vertical posts 11, a protuberance 423 is provided on each hooking portion 42, as can be seen in Fig. 13. When the rail 41 is properly connected to the vertical posts 11, the protuberance 423 at each hooking portion 42 is protruded into the hook eye 111 receiving the lower retaining hook 422 to abut against an upper edge of that hook eye 111.

A closed space enclosed in the door panels 50, the horizontal shelves 12, the side panels 20, and the back panel 30, and a closed space enclosed in each drawer 40 may be used to store various things therein. The positions of the drawers 40, the door panels 50, and the horizontal shelves 12 on the rack 10 may be freely changed to meet different users' requirements.

Skirt boards 17 may be fixedly connected to a lower end of the rack 10, as shown in Fig. 14. To do so, an upper and a lower pin 18 are fixedly provided near a lower end of each vertical post 11 on a side surface facing toward an adjacent vertical post 11, and two C-shaped resilient brackets 171 are separately fixed to an inner side of each skirt board 17 near two ends thereof, such that two ends of the C-shaped resilient brackets 171 firmly abut against the upper and the lower pins 18 to connect the skirt board 17 to the lower end of the rack 10.

With the above arrangements, the sectional cabinet of the present invention can be horizontally and vertically extended as desired. A user may freely divide a large-sized sectional cabinet into two or more smaller ones, or combine two or more smaller sectional cabinets into a larger one, depending on an actual condition of the space available for the sectional cabinet. Accordingly, in the event it is desired to move the cabinet to a different position, the cabinet can be re-assembled according to different sizes and configurations of the new position. Therefore, the sectional cabinet is very flexible and convenient for use.